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09/762,127	02/02/2001	Michihiro Nagaishi	P5275B	1411
20178	7590	11/10/2004	EXAMINER	
EPSON RESEARCH AND DEVELOPMENT INC			CHEN, CHONGSHAN	
INTELLECTUAL PROPERTY DEPT			ART UNIT	PAPER NUMBER
150 RIVER OAKS PARKWAY, SUITE 225				
SAN JOSE, CA 95134			2162	

DATE MAILED: 11/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/762,127	NAGAISHI ET AL.	
	Examiner Chongshan Chen	Art Unit 2162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 02 July 2004.

2a) This action is **FINAL**.                                   2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-14,16-25,27-29,31-42,44-49,51-62 and 64-66 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-14,16-25,27-29,31-42,44-49,51-62 and 64-66 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

- Certified copies of the priority documents have been received.
- Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
- Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 8/2/2004.

4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.

5) Notice of Informal Patent Application (PTO-152)

6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

1. This action is responsive to Amendment filed on 2 July 2004. Claims 1-14, 16-25, 27-29, 31-42, 44-49, 51-62 and 64-66 are pending in this Office Action.

### ***Response to Arguments***

2. As per applicant's arguments regarding the references do not teach clustering result includes a group of identifiers arranged in a non-hierarchical fashion, each identifier being presented with its associated cluster of search result have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Oren Zamir et al. ("Zamir", "Grouper: a dynamic clustering interface to Web search results", Computer Networks, Vol. 31, No. 11-16, pp. 1361-1374, 17, May, 1999). Zamir teaches a plurality of clusters, each cluster having an identifier, and the identifiers are being presented in a non-hierarchical arrangement (Zamir, page 1364, 3.2 User interface, page 1365). Please see the rejection below.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-6, 16-19, 22-24 and 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tso et al. ("Tso", 6,385,602) in view of Oren Zamir et al. ("Zamir", "Grouper: a dynamic clustering interface to Web search results", Computer Networks, Vol. 31, No. 11-16, pp. 1361-1374, 17, May, 1999).

As per claim 1, Tso teaches an information categorizing method comprising a step of acquiring, through a clustering module, a plurality of search results searched by a search service, a step of performing, through the clustering module, a clustering process on the search results that categorizes the search results into a clustering result, wherein neither the clustering process performing step nor the clustering result is based on any predefined categories (Tso, col. 2, line 53 - col. 3, line 13, col. 4, lines 44-48, "The method comprises the steps of dynamically establishing one or more search results and displaying on the user interface one or more interface objects corresponding to the one or more search result categories"; col. 3, lines 52-60, "*Dynamic categorization* involves examining search results and dynamically establishing one or more search result categories based upon attributes of the search results ... a varied of grouping or *clustering* techniques may be used to dynamically establish the search result categories").

Tso does not explicitly disclose a step of generating a non-hierarchical clustering result summary table representing a summary of the clustering result, and a step of outputting the non-hierarchical summary table together with the clustering result such that all of the search results are displayed, each search result being displayed in one or more of the clusters, wherein the summary table and the clustering result is distinct.

Zamir teaches a step of generating a non-hierarchical clustering result summary table representing a summary of the clustering result, and a step of outputting the non-hierarchical

summary table together with the clustering result such that all of the search results are displayed, each search result being displayed in one or more of the clusters, wherein the summary table and the clustering result is distinct (Zamir, page 1364, 3.2. User interface, "The main results page displays the number of documents retrieved and the number of clusters found ... A summary of a cluster includes ...", page 1365). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to generate a summary table and display the summary table together with the clustering result in the information categorizing system of Tso. Because the summary table displays useful information about each cluster, such as the size of the cluster, the shared phrases of the documents in the cluster, etc. The user can use the information from cluster summary table to decide which cluster he/she wants to review. This enables the user to find desired information quickly.

As per claim 2, Tso and Zamir teach all the claimed subject matters as discussed in claim 1, and further teach a step of converting, through a converter module, the search result searched by the search service into a format that is processed by the clustering module (Tso, col. 11, lines 55-60).

As per claim 3, Tso and Zamir teach all the claimed subject matters as discussed in claim 2, and further teach the converter module is arranged correspondingly to each of a plurality of search services when the clustering process is performed correspondingly to the plurality of search services (Zamir, page 1366, Fig. 3).

As per claim 4, Tso and Zamir teach all the claimed subject matters as discussed in claim 3, and further teach a search process is performed using one search service selected from the

plurality of search services and the clustering process is performed on the search result searched by the selected search service (Zamir, page 1366, Fig. 3).

As per claim 5, Tso and Zamir teach all the claimed subject matters as discussed in claim 3, and further teach search processes are performed in parallel using at least two search services of the plurality of search services, respective search results are collected, and the clustering process is performed on the collected search results (Zamir, page 1366-1377).

As per claim 6, Tso and Zamir teach all the claimed subject matters as discussed in claim 3, and further teach search processes are performed in parallel using at least two search services of the plurality of search services, and the clustering process is individually performed on the search results (Zamir, page 1366-1377).

As per claim 16, Tso and Zamir teach all the claimed subject matters as discussed in claim 1, and further teaches the clustering result summary table includes a cluster name of each cluster which is obtained through the clustering process (Zamir, page 1364-1365).

As per claim 17, Tso and Zamir teach all the claimed subject matters as discussed in claim 16, and further teaches the clustering result is mutually linked with the clustering result summary table, wherein when a cluster name portion of the clustering result summary table is designated, the corresponding cluster portion of the clustering result is displayed, and wherein when one cluster portion of a clustering result is designated, the clustering result summary table is displayed (Zamir, page 1364-1365).

As per claim 18, Tso and Zamir teach all the claimed subject matters as discussed in claim 17, and further teach the head portion of an outline surrounding the cluster or the last line

in the outline of the cluster present immediately prior to the first cluster is displayed on the top of a screen (Zamir, page 1365).

As per claim 19, Tso and Zamir teach all the claimed subject matters as discussed in claim 18, and further teach the clustering result summary table is displayed with the head portion thereof appearing first on the screen (Zamir, page 1365).

As per claim 22, Tso and Zamir teach all the claimed subject matters as discussed in claim 16, and further teaches a plurality of documents to be clustered are the ones which have been searched using a keyword input by a user, the manner of displaying the cluster names containing the keyword input by the user is different in the clustering result summary table from the other cluster names (Zamir, page 1364-1365).

Claims 23-24 and 27-28 are rejected on grounds corresponding to the reasons given above for claims 1-2.

5. Claims 7, 13, 31-35, 41, 44-45, 47-48, 51-55, 61 and 64-65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tso et al. ("Tso", 6,385,602) in view of Oren Zamir et al. ("Zamir", "Grouper: a dynamic clustering interface to Web search results", Computer Networks, Vol. 31, No. 11-16, pp. 1361-1374, 17, May, 1999) and further in view of Mukherjea et al. ("Mukherjea", 6,415,282).

As per claim 7, Tso and Zamir teach all the claimed subject matters as discussed in claim 1, except for explicitly disclosing information to be clustered is at least one of the title of a document, a URL address, an update date, and a file size of an individual search result. Mukherjea teaches information to be clustered is at least one of the title of a document, a URL address, an update date, and a file size of an individual search result (Mukherjea, col. 3, lines 40-

43). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use URL address to cluster documents in the information categorizing system of Tso. Because the URL address reflects the subject area which the document is related to. Using this information can accurately categorize related documents into a cluster.

As per claim 13, Tso, Zamir and Mukherjea teach all the claimed subject matters as discussed in claim 7, and further teach the clustering process is performed based on a feature, and wherein the title of each document is detected and a word characteristic of and contained in the title is extracted as the feature (Tso, col. 4, lines 51-55).

As per claim 31, Tso teaches a method for categorizing digital information, comprising the steps of:

acquiring at least one group of a plurality of digital items from at least one search of a database or network (Tso, col. 2, line 53 - col. 3, line 13);

clustering the plurality of digital items in at least one group according to each of the selected cluster-indexing information (Tso, col. 2, line 53 - col. 3, line 13); and

outputting each cluster of digital items as a cluster result (Tso, col. 2, line 53 - col. 3, line 13);

wherein neither the clustering nor the cluster result is based on any predefined categories (Tso, col. 2, line 53 - col. 3, line 13).

Tso does not explicitly disclose extracting from each item in at least one group of a plurality of digital items selected cluster-indexing information comprising at least one of title, URL address, update date, and file size. Mukherjea teaches extracting from each item in at least one group of a plurality of digital items selected cluster-indexing information comprising at least

one of title, URL address, update date, and file size (Mukherjea, col. 3, lines 40-43). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use URL address to cluster documents in the information categorizing system of Tso. Because the URL address reflects the subject area which the document is related to. Using this information can accurately categorize related documents into a cluster.

Tso does not explicitly disclose generating a non-hierarchical clustering result summary table representing a summary of the clustering result, and a step of outputting the non-hierarchical summary table together with the clustering result such that all of the search results are displayed, each search result being displayed in one or more of the clusters, wherein the summary table and the clustering result is distinct. Zamir teaches a step of generating a non-hierarchical clustering result summary table representing a summary of the clustering result, and a step of outputting the non-hierarchical summary table together with the clustering result such that all of the search results are displayed, each search result being displayed in one or more of the clusters, wherein the summary table and the clustering result is distinct (Zamir, page 1364-1365). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to generate a summary table and display the summary table together with the clustering result in the information categorizing system of Tso. Because the summary table displays useful information about each cluster, such as the size of the cluster, the shared phrases of the documents in the cluster, etc. The user can use the information from cluster summary table to decide which cluster he/she wants to review. This enables the user to find desired information quickly.

As per claim 32, Tso, Zamir and Mukherjea teach all the claimed subject matters as discussed in claim 31, and further teach converting each of the acquired digital items into a common format before performing the clustering (Tso, col. 11, lines 55-60).

As per claim 33, Tso, Zamir and Mukherjea teach all the claimed subject matters as discussed in claim 31, and further teach the at least one group of a plurality of digital items is acquired by selecting only one such group from a plurality of groups, each group being the result of an independent search, and wherein the clustering is performed on the selected one group (Zamir, Fig. 3, page 1366-1367).

As per claim 34, Tso, Zamir and Mukherjea teach all the claimed subject matters as discussed in claim 31, and further teach wherein the at least one group of a plurality of digital items acquired comprises a plurality of such groups, each group being the result of an independent search performed in parallel with one another, and wherein the clustering is performed on the collective search results (Zamir, Fig. 3, page 1366-1367).

As per claim 35, Tso, Zamir and Mukherjea teach all the claimed subject matters as discussed in claim 31, and further teach wherein the at least one group of a plurality of digital items acquired comprises a plurality of such groups, each group being the result of an independent search performed in parallel with one another, and wherein the clustering is individually performed on the search result (Zamir, Fig. 3, page 1366-1367).

As per claim 41, Tso, Zamir and Mukherjea teach all the claimed subject matters as discussed in claim 31, and further teaches the title of each digital item in at least one group of a plurality of digital items is extracted, each title being defined by selected characters in the corresponding digital item, the selected characters being identified by one of location, size and a

fixed number of words in from a designated beginning of the digital item, and wherein the identified selected characters are extracted and clustering is performed based on the selected characters extracted (Mukherjea, col. 3, line 34 - col. 5, lines 65).

As per claim 44, Tso, Zamir and Mukherjea teach all the claimed subject matters as discussed in claim 15, and further teach the clustering result summary table includes a cluster name of each cluster which is obtained through the clustering process (Zamir, page 1364-1365).

As per claim 45, Tso, Zamir and Mukherjea teach all the claimed subject matters as discussed in claim 16, and further teach the clustering result is mutually linked with the clustering result summary table, wherein when a cluster name portion of the clustering result summary table is designated, the corresponding cluster portion of the clustering result is displayed, and wherein when one cluster portion of a clustering result is designated, the clustering result summary table is displayed (Zamir, page 1364-1365).

Claims 47-48 and 51-55 are rejected on grounds corresponding to the reasons given above for claims 31-35.

Claim 61 is rejected on grounds corresponding to the reasons given above for claim 41.

Claims 64-65 are rejected on grounds corresponding to the reasons given above for claims 44-45.

6. Claims 8-12, 14, 20-21, 25 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tso et al. ("Tso", 6,385,602) in view of Oren Zamir et al. ("Zamir", "Grouper: a dynamic clustering interface to Web search results", Computer Networks, Vol. 31, No. 11-16, pp. 1361-1374, 17, May, 1999) and further in view of Jacobson et al. ("Jacobson", 6,167,397).

As per claim 8, Tso and Zamir teach all the claimed subject matters as discussed in claim 1, except for explicitly disclosing the order of the clustering result is rearranged using a score indicating the degree of match between the clustering result and a search request for each document and the clustering result with the order thereof rearranged is then output. Jacobson teaches disclosing the order of the clustering result is rearranged using a score indicating the degree of match between the clustering result and a search request for each document and the clustering result with the order thereof rearranged is then output (Jacobson, col. 1, lines 58-63). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a score to indicate the degree of match in the system of Tso in order to provide a ranked list of document clusters. The ranked list tells the user which document is most relevant to the search query, and enables the user to find the most relevant document quickly.

As per claim 9, Tso, Zamir and Jacobson teach all the claimed subject matters as discussed in claim 8, except for explicitly disclosing calculating the average of scores of the documents contained in each cluster to treat the average of each cluster as a cluster score. It is important to note that Jacobson teaches weight and rank document clusters (Jacobson, col. 1, lines 58-63). Applicant should note that weight and rank document clusters involves calculating the weight values for the document clusters and using the weight values to rank the document clusters. The average weight scores of the documents contained in each cluster reflects how relevant is each cluster to the search query. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to calculate and use the average of scores of the documents contained in each cluster to rank the document clusters in the

information categorizing system of Tso because the average scores reflects the relevance of each cluster to the search query.

As per claim 10, Tso, Zamir and Jacobson teach all the claimed subject matters as discussed in claim 8, except for explicitly disclosing determining the maximum value of the scores of the documents in each cluster to treat the maximum score of each cluster as the cluster score. It is important to note that Jacobson teaches weight and rank document clusters (Jacobson, col. 1, lines 58-63). Applicant should note that weight and rank document clusters involves calculating the weight values for the document clusters and using the weight values to rank the document clusters. The maximum value of the scores of the documents in each cluster reflects how relevant is the most relevant document in each cluster to the search query. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the maximum value of the scores of the documents in each cluster to rank the document clusters in the information categorizing system of Tso because the maximum value reflects how relevant is the most relevant document in each cluster to the search query. This will rank the most relevant document at the top, which enables the user to easily locate the most relevant document.

As per claim 11, Tso, Zamir and Jacobson teach all the claimed subject matters as discussed in claim 8, except for explicitly disclosing determining a score at a midway point or a substantially midway point in each cluster when the documents contained in each cluster are arranged in the order of magnitude of scores assigned thereto, to treat the score at the midway point or the substantially midway point as the cluster score. It is important to note that Jacobson teaches weight and rank document clusters (Jacobson, col. 1, lines 58-63). Applicant should note

that weight and rank document clusters involves calculating the weight values for the document clusters and using the weight values to rank the document clusters. The score at a midway point in each cluster reflect on average how relevant is each cluster to the search query. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the score at a midway point in each cluster to rank the document clusters in the information categorizing system of Tso because the score at a midway point reflects the average relevance of each cluster to the search query.

As per claim 12, Tso, Zamir and Jacobson teach all the claimed subject matters as discussed in claim 9, and further teach the cluster score determining step for rearranging the cluster order is individually performed correspondingly to the plurality of search services when the clustering process is performed correspondingly to the search results provided by the plurality of search services (Jacobson, col. 1, line 58 - col. 2, line 22).

As per claim 14, Tso, Zamir and Jacobson teach all the claimed subject matters as discussed in claim 8, and further teach displaying the clusters in the order of the magnitude of scores from a high score to a low score and wherein when there are clusters having the same cluster score, one of the clusters having a larger number of documents there within is positioned higher in the cluster order (Jacobson, col. 1, line 58 - col. 2, line 22).

As per claim 20, Tso and Zamir teach all the claimed subject matters as discussed in claim 16, and further teach displaying the clustering result summary table (Zamir, page 1364-1365). Tso does not explicitly disclose the arrangement order of clusters forming the clustering result summary table agrees with the arrangement order of the clusters in the clustering result. Jacobson teaches ranking the clusters (Jacobson, col. 1, line 58 - col. 2, line 22). The ranked

document clusters arranges the document clusters according to their relevance. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to rank the document clusters and their corresponding entries in the summary table in the information categorizing system of Tso. The ranked document clusters and summary table display the most relevant cluster on top. This enables the user to easily locate the most relevant information.

As per claim 21, Tso and Zamir teach all the claimed subject matters as discussed in claim 16, and further teach displaying the clustering result summary table (Tso, Fig. 3C). Tso does not explicitly disclose the manner of displaying the cluster names is changed in the clustering result summary table depending on the importance of each cluster in response to the clustering result. Jacobson teaches ranking the clusters (Jacobson, col. 1, line 58 - col. 2, line 22). The ranked document clusters would display the most important cluster name on top. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to display the most important cluster name on top in the information categorizing system of Tso. This enables the user to easily locate the most important information.

Claims 25 and 29 are rejected on grounds corresponding to the reasons given above for claim 8.

7. Claims 36-40, 42, 46, 49, 56-60, 62 and 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tso et al. ("Tso", 6,385,602) in view of Oren Zamir et al. ("Zamir", "Grouper: a dynamic clustering interface to Web search results", Computer Networks, Vol. 31, No. 11-16, pp. 1361-1374, 17, May, 1999) in view of Mukherjea et al. ("Mukherjea", 6,415,282) and further in view of Jacobson et al. ("Jacobson", 6,167,397).

As per claim 36, Tso, Zamir and Mukherjea teach all the claimed subject matters as discussed in claim 31, except for explicitly disclosing the order of the clustering result is rearranged using a score indicating the degree of match between the clustering result and a search request for each document and the clustering result with the order thereof rearranged is then output. Jacobson teaches disclosing the order of the clustering result is rearranged using a score indicating the degree of match between the clustering result and a search request for each document and the clustering result with the order thereof rearranged is then output (Jacobson, col. 1, lines 58-63). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to rank the document clusters in the information categorizing system of Tso. Because the ranked document clusters tells the user which cluster is the most important cluster. This enables the user to easily locate important documents.

Claims 37-39 are rejected on grounds corresponding to the reasons given above for claims 9-11.

As per claim 40, Tso, Zamir, Mukherjea and Jacobson teach all the claimed subject matters as discussed in claim 36, and further teach the cluster score determining step for rearranging the cluster order is individually performed correspondingly to the plurality of search services when the clustering process is performed correspondingly to the search results provided by the plurality of search services (Jacobson, col. 1, line 58 - col. 2, line 22).

As per claim 42, Tso, Zamir, Mukherjea and Jacobson teach all the claimed subject matters as discussed in claim 36, and further teach displaying the clusters in the order of the magnitude of scores from a high score to a low score and wherein when there are clusters having

the same cluster score, one of the clusters having a larger number of documents there within is positioned higher in the cluster order (Jacobson, col. 1, line 58 - col. 2, line 22).

Claim 46 is rejected on grounds corresponding to the reasons given above for claim 21.

Claim 49 is rejected on grounds corresponding to the reasons given above for claim 36.

Claims 56-60 are rejected on grounds corresponding to the reasons given above for claims 36-40.

Claim 62 is rejected on grounds corresponding to the reasons given above for claim 42.

Claim 66 is rejected on grounds corresponding to the reasons given above for claim 21.

### *Conclusion*

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

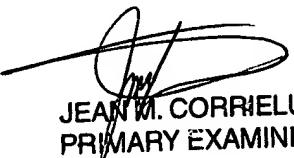
***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chongshan Chen whose telephone number is (571)272-4031. The examiner can normally be reached on Monday - Friday (8:00 am - 4:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E Breene can be reached on (571)272-4107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CC  
October 29, 2004



JEAN M. CORRIELUS  
PRIMARY EXAMINER